

What is claimed is:

1. A wireless information processing system comprising:

5 a wireless information processing apparatus comprising:

10 a first start signal generator configured to generate a first start signal capable to request a wireless information recording medium having unique identification information to set a command slot;

15 a second start signal generator configured to generate a second start signal capable to request the wireless information recording medium to transmit the identification information;

20 a third start signal generator configured to generate a third start signal capable to request the wireless information recording medium to set a time slot;

a transmitter capable to transmit the first to third start signals to the plurality of wireless information recording media located in a communication area; and

25 a receiver capable to receive a response signal including the identification information

transmitted by the wireless information recording medium, and
the wireless information recording medium comprising:

5 an identification information recorder in which the identification information is recorded;

 a receiver configured to receive the first to third start signals;

10 a command slot setup unit configured to set the command slot;

 an accumulation unit configured to accumulate a number of times that the second start signal has been received;

15 a transmitter configured to transmit the response signal at a response time interval defined by the time slot when the number of times that the second start signal is received matches a value of the command slot or when a value of the time slot is set; and

20 a time slot setup unit capable to set the time slot when the response signal has not been appropriately received by the wireless information processing apparatus.

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2. A wireless information processing system

comprising:

a wireless information processing apparatus comprising:

5 a first start signal generator configured to generate a first start signal capable to request a wireless information recording medium having unique identification information to set a command slot;

10 a second start signal generator configured to generate a second start signal capable to request the wireless information recording medium to transmit the identification information;

15 a third start signal generator configured to generate a third start signal capable to request the wireless information recording medium to set a time slot;

20 a transmitter capable to transmit the first to third start signals to the plurality of wireless information recording media located in a communication area; and

25 a receiver capable to receive a response signal including the identification information transmitted by the wireless information recording medium, and

the wireless information recording medium

comprising:

an identification information recorder in which the identification information is recorded;

5 a receiver configured to receive the first to third start signals;

a command slot setup unit configured to set the command slot;

10 an accumulation unit configured to accumulate a number of times that the second start signal has been received;

a time slot setup unit configured to set the time slot; and

15 a transmitter capable to transmit the response signal to the wireless information processing apparatus at a response time interval defined by the time slot when the number of times that the second start signal is received matches a value of the command slot.

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3. A wireless information recording medium comprising:

an identification information recorder in which unique identification information is recorded;

25 a receiver capable to receive a first start signal requesting a setup of a command slot, a second start

signal requesting a transmission of the identification information, and a third start signal requesting a setup of a time slot, the first to third signals being transmitted by a wireless information processing apparatus;

5 a command slot setup unit configured to set the command slot;

an accumulation unit configured to accumulate a number of times that the second start signal has been received;

10 a transmitter capable to transmit a response signal including the identification information to the wireless information processing apparatus at a response time interval defined by the time slot when the number of times that the second start signal is received matches a value of the command slot or when the time slot is set; 15 times and

a time slot setup unit capable to set the time slot when the response signal has not been appropriately received by the wireless information processing apparatus.

4. A wireless information recording medium comprising:

25 an identification information recorder in which unique identification information is recorded;

a receiver capable to receive a first start signal requesting a setup of a command slot, a second start signal requesting a transmission of the identification information, and a third start signal requesting a setup of a time slot, the first to third signals being transmitted by a wireless information processing apparatus;

5 a command slot setup unit configured to set the command slot;

10 an accumulation unit configured to accumulate a number of times that the second start signal has been received;

a time slot setup unit configured to set the time slot; and

15 a transmitter capable to transmit a response signal including the identification information to the wireless information processing apparatus at a response time interval defined by the time slot when the number of times that the second start signal is received matches a 20 value of the command slot.

5. The wireless information recording medium of claim 3, wherein the value of the command slot is any one of integers from 0 to N (N is 0 or an arbitrary natural 25 number), a value of the time slot is any one of integers from 0 to M (M is 0 or an arbitrary natural number),

information on the integer N is added to the first start signal, and information on the integer M is added to the third start signal.

5 6. The wireless information recording medium of claim
5, wherein the accumulation unit is a command slot
subtractor configured to decrement the value of the
command slot by one each time the second start signal is
received and determines whether the value of the
10 command slot has reached 0.

7. The wireless information recording medium of claim
3, wherein the command slot setup unit comprises:
 a first random number generator configured to
15 generate a random number; and
 a command counter configured to employ the
random number to set the command slot, and
 wherein the time slot setup unit comprises:
 a second random number generator configured to
20 generate a random number; and
 a time counter configured to employ the random
number to set the time slot.

8. The wireless information recording medium of claim
25 3 wherein the command slot setup unit comprises:
 a random number generator configured to generate

a random number, and

a command counter configured to employ a part of
the random number to set the command slot, and

wherein the time slot setup unit comprises a time
5 counter configured to employ other part of the random
number to set the time slot.

9. The wireless information recording medium of claim
3, further comprising a specific information controller
10 comprising:

a specific information recorder capable to record
specific information being effective during a
communication period with the wireless information
processing apparatus; and

15 a specific information comparator configured to
compare the specific information with specific
information included in the first to third start signals,

wherein, when the specific information recorded in
the specific information recorder matches the specific
20 information included in the first to third start signals,
the command slot setup unit, the accumulation unit and
the time slot setup unit execute each request included in
the first to third start signals.

25 10. The wireless information recording medium of
claim 9, wherein the receiver further receives a fourth

start signal requesting a change in the specific information recorded in the specific information recorder, and

wherein the specific information controller further
5 comprises a specific information change unit configured
to change the specific information recorded in the
specific information recorder when the specific
information in the specific information recorder matches
specific information included in the fourth start signal,
10 and the identification information matches pre-change
identification information included in the fourth start
signal.

11. A wireless information processing apparatus
15 comprising:

a first start signal generator configured to
generate a first start signal capable to request a
wireless information recording medium having unique
identification information to set a command slot;

20 a second start signal generator configured to
generate a second start signal capable to request the
wireless information recording medium to transmit the
identification information;

a third start signal generator configured to
25 generate a third start signal capable to request the
wireless information recording medium to set a time

slot;

a transmitter capable to transmit the first to third start signals to the plurality of wireless information recording media located in a communication area; and

5 a receiver capable to receive a response signal including the identification information transmitted by the wireless information recording medium, in which a number of times that the second start signal has been received matches a value of the command slot, and
10 capable to receive the response signal transmitted by the wireless information recording medium at a response time interval defined by the time slot.

12. The wireless information processing apparatus of
15 claim 11, wherein the value of the command slot is any one of integers from 0 to N (N is 0 or an arbitrary natural number), a value of the time slot is any one of integers from 0 to M (M is 0 or an arbitrary natural number), information on the integer N is added to the first start
20 signal, and information on the integer M is added to the third start signal.

13. The wireless information processing apparatus of
claim 11, wherein the first to third start signals include
25 specific information being effective during a communication period with the wireless information

recording medium.

14. The wireless information processing apparatus of
claim 13 further comprising a fourth start signal
5 generator configured to generate a fourth start signal
capable to request the wireless information recording
medium to change the specific information included in
the wireless information recording medium.

10 15. A communication method for a wireless information
processing system comprising:

a wireless information processing apparatus
instructing a plurality of wireless information recording
media present in a communication area to set command
15 slots of which values are any one of integers from 0 to N
(N is 0 or an arbitrary natural number);

the wireless information recording medium, in
which the value of the command slot matches a number of
times that a response instruction has been received from
20 the wireless information processing apparatus,
transmitting unique identification information included
in the wireless information recording media;

the wireless information processing apparatus
instructing the plurality of wireless information
25 recording media to set time slots of which values are any
one of integers from 0 to M (M is 0 or an arbitrary

natural number); and

the wireless information recording medium, of which the identification information transmitted has not been appropriately received by the wireless information processing apparatus, transmitting the identification information at a response time interval defined by the time slot.

16. A communication method for a wireless information processing system comprising:

a wireless information processing apparatus transmitting a first start signal requesting a setup of command slots to a plurality of wireless information recording media present in a communication area;

15 the wireless information recording medium, which has received the first start signal, setting the command slot;

the wireless information processing apparatus transmitting a second start signal requesting the 20 wireless information recording medium to transmit unique identification information included in the wireless information recording medium;

the wireless information recording medium, in which a number of times that the second start signal has 25 been received matches a value of the command slot, transmitting a response signal including the

identification information;

the wireless information processing apparatus transmitting a third start signal requesting a setup of a time slot;

5 the wireless information recording medium, for which the response signal has not been appropriately received by the wireless information processing apparatus, setting the time slot; and

10 the wireless information recording medium transmitting the response signal at a response time interval defined by the time slot.

17. The communication method of claim 16, wherein the value of the command slot is any one of integers from 0 to 15 N (N is 0 or an arbitrary natural number), a value of the time slot is any one of integers from 0 to M (M is 0 or an arbitrary natural number), information on the integer N is added to the first start signal, and information on the integer M is added to the third start signal.

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18. The communication method of claim 17, wherein the transmission of the response signal including the identification information from the wireless information recording medium in which the number of time that the 25 second start signal matches the value of the command slot, comprising:

decrementing the value of the command slot each time the second start signal is received; and

transmitting the response signals when the value of the command slots reaches 0.

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19. The communication method of claim 16, wherein the wireless information recording media, for which the response signals have not been appropriately received by the wireless information processing apparatus, are two or more wireless information recording media having set a same value for the command slots and simultaneously transmitted the response signals.

20. A communication method for a wireless information processing system comprising:

a wireless information processing apparatus instructing a plurality of wireless information recording media present in a communication area to set command slots to any one of integers from 0 to N (N is 0 or an arbitrary natural number), and set time slots to any one of integers from 0 to M (M is 0 or an arbitrary natural number);

the wireless information recording medium, in which a value of the command slot matches a number of times that a response instruction transmitted by the wireless information processing apparatus has been

received, transmitting unique identification information included in the wireless information recording medium at a response time interval defined by the time slots.

5 21. The communication method of claim 20, further comprising:

the wireless information processing apparatus transmitting, to the plurality of wireless information recording media present in the communication area, a
10 first start signal requesting a setup of command slots and a third start signal requesting a setup of time slots;

the wireless information recording medium which has received the first and third start signals setting the command slot and the time slot;

15 the wireless information processing apparatus transmitting the third start signal and a second start signal requesting a transmission of unique identification information included in the wireless information recording medium; and

20 the wireless information recording medium, in which the number of times that the second start signal has been received matches the value of the command slot, transmitting a response signal including the identification information at a response time interval
25 defined by the time slot.

22. The communication method of claim 21, wherein the value of the command slot is any one of integers from 0 to N (N is 0 or an arbitrary natural number), a value of the time slot is any one of integers from 0 to M (M is 0 or an arbitrary natural number), information on the integer N is added to the first start signal, and information on the integer M is added to the third start signal.

23. The communication method of claim 22, wherein the transmission of the response signal including the identification information by the wireless information recording medium in which the number of times that the second start signal has been received matches the value of the command slot, at the response interval defined by the time slot, comprising:

decrementing the value of the command slot each time the second start signal is received; and

transmitting the response signal at the response time interval when the value of the command slot reaches 0.

24. The communication method of claim 16, wherein the command slots and the time slots are set by using random numbers, respectively.